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10/721,162

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Makoto Nishimura

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EXAMINER

KENNEDY, JOSHUA T

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/721,162

Applicant(s)

NISHIMURA ET AL.

Examiner

JOSHUA T. KENNEDY

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 12-20 is/are pending in the application.
4a) Of the above claim(s) 1, 3 and 12-14 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 2, 4-6 and 15-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claims 1, 3, 12-14 have been withdrawn.

Claims 7-11 have been cancelled.

Claims 2, 4-6 and 15-20 have been examined.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5, 6, 15, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tetsuo et al (JP Patent 09-060682) in view of Schleicher (US Patent 5,305,517).

As to Claims 2 and 17. Tetsuo et al disclose a tube assembly comprising a first tubular body (2) and a second tubular body (1) disposed such that walls of said first and second tubular bodies overlap (Fig 1), a plurality of joint portions (P) being formed between said first and second tubular bodies by drawing in a drawing direction an overlapping part of the walls of said first and second tubular bodies at a plurality of positions (Fig 1), wherein said plurality of joint portions includes at least one first joint portion in which the

wall of said first tubular body is laterally extended into the wall of said second tubular body (Examiner considers the dented joint portions to extend laterally into the wall; also, see note below) and at least one second joint portion in which the walls of said first tubular body and said second tubular body are in contact with each other in a cup-like surface configuration (Fig 1; Examiner considers the dent portion to form a cup-like surface).

the wall of said first tubular body including a forward surface located forward relative to the drawing direction, and the wall of said second tubular body including a rearward surface located rearward relative to the drawing direction (Fig 1),

a joint portion (located at P), the forward surface including a portion that is reduced diametrically relative to the drawing direction, the rearward surface including a portion that is reduced diametrically relative to the drawing direction, the diametrically reduced portion of the forward surface being in contact with the diametrically reduced portion of the rearward surface such that they are separable from each other in the drawing direction (Fig 1).

However, Tetsuo et al do not disclose an additional joint portion, wherein the forward surface including a concave portion that is enlarged diametrically relative to the drawing direction, the rearward surface including a convex portion that is enlarged diametrically relative to the drawing direction, the diametrically enlarged portion of the forward surface being extruded into the diametrically enlarged portion of the rearward surface, thus ensuring high peeling resistance.

Schleicher teaches a linkage assembly (Figs 18-19) having a joint portion wherein the forward surface including a concave portion that is enlarged diametrically (342) relative to the drawing direction, the rearward surface including a convex portion (346) that is enlarged diametrically relative to the drawing direction (Fig 7), the diametrically enlarged portion of the forward surface being extruded into the diametrically enlarged portion of the rearward surface which "enables material to be concentrated in the corner to further strengthen the joint and to increase peel strength" (Col 8, Lines 15-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the joint portion of Tetsuo et al to have an additional joint portion as taught by Schleicher to enable the material to be concentrated in the corner to further strengthen the joint and to increase peel strength.

It is the patentability of the product, and not recited process steps, that is to be determined in product-by-process claims irrespective of whether or not only process has been recited. Accordingly, it is of little consequence how the joint portions were formed when the joint portions are present. See MPEP § 2113.

Examiner also notes that the specific method of forming is not germane to the issue of patentability of the device itself. Therefore, the limitation "extruded" has been given only limited patentable weight. See MPEP § 2113.

As to Claims 5 and 6. Tetsuo et al disclose said first tubular body (2) forms a support member being selected from a spring seat and a knuckle bracket and said second tubular body (1) forms a tube for a piston-cylinder assembly (Abstract, Lines 6-8).

As to Claims 15 and 18. Tetsuo et al disclose an assembly, comprising:

a first body having a first layer (2) and

a second body having a second layer (1), the bodies being disposed such that the first and second layers overlap (Fig 1), a plurality of joint portions (P) being formed between said first and second bodies by drawing an overlapping part of the layers of said first and second bodies at a plurality of positions (Fig 1),

wherein said plurality of joint portions includes at least one first joint portion in which the first layer is laterally extended into the second layer (Examiner considers the dented joint portions to extend laterally into the wall; also, see note below) and at least one second joint portion in which the first layer and the second layer are contact with each other in a cup-like surface configuration (Fig 1; Examiner considers the dent portion to form a cup-like surface),

a joint portion, the forward surface including a portion that is reduced diametrically relative to the drawing direction, the rearward surface including a portion that is reduced diametrically relative to the drawing direction, the diametrically reduced portion of the forward surface being in contact with the diametrically reduced portion of the rearward surface such that they are separable from each other in the drawing direction (Fig 1).

However, Tetsuo et al do not disclose an additional joint portion, wherein the forward surface including a portion that is enlarged diametrically relative to the drawing direction, the rearward surface including a portion that is enlarged diametrically relative to the drawing direction, the diametrically enlarged portion of the forward surface being

extruded into the diametrically enlarged portion of the rearward surface, thus ensuring high peeling resistance.

Schleicher teaches a linkage assembly (Figs 18-19) having a joint portion wherein the forward surface including a concave portion that is enlarged diametrically (342) relative to the drawing direction, the rearward surface including a convex portion (346) that is enlarged diametrically relative to the drawing direction (Fig 7), the diametrically enlarged portion of the forward surface being extruded into the diametrically enlarged portion of the rearward surface which "enables material to be concentrated in the corner to further strengthen the joint and to increase peel strength" (Col 8, Lines 15-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the joint portion of Tetsuo et al to have an additional joint portion as taught by Schleicher to enable the material to be concentrated in the corner to further strengthen the joint and to increase peel strength.

It is the patentability of the product, and not recited process steps, that is to be determined in product-by-process claims irrespective of whether or not only process has been recited. Accordingly, it is of little consequence how the joint portions were formed when the joint portions are present. See MPEP § 2113.

Examiner also notes that the specific method of forming is not germane to the issue of patentability of the device itself. Therefore, the limitation "extruded" has been given only limited patentable weight. See MPEP § 2113.

As to Claims 19 and 20. Tetsuo in view of Schleicher disclose the tube assembly significantly as claimed, but do not explicitly disclose at least two joint portions of the plurality of joint portions are located at diametrically opposite positions perpendicular to an axial direction of the tube assembly. Tetsuo does, however, disclose that "the grip part is fixed... at a plurality of points (P) on its outer surface at suitable intervals in the circumferential direction of the grip part" (Abstract), implying that at least two of the joint portions could be arranged such that they were located at diametrically opposite positions. It would have been obvious to a person of ordinary skill in the art to modify Tetsuo in view of Schleicher as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn, because the instant invention as claimed has the properties predicted by the prior art, it would have been obvious to have at least two of the joint portions could be arranged such that they were located at diametrically opposite positions order to gain the commonly understood benefits and applications of such an adaptation and/or modification, producing no new and unexpected results.

Claims 2, 4, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tetsuo et al in view of Stevenson et al (US Patent 6,814,531).

Tetsuo et al disclose a tube assembly comprising a first tubular body (2) and a second tubular body (1) disposed such that walls of said first and second tubular bodies overlap (Fig 1), a plurality of joint portions (P) being formed between said first and second tubular bodies by drawing in a drawing direction an overlapping part of the walls

of said first and second tubular bodies at a plurality of positions (Fig 1), wherein said plurality of joint portions includes at least one first joint portion in which the wall of said first tubular body is laterally extended into the wall of said second tubular body (Examiner considers the dented joint portions to extend laterally into the wall; also, see note below) and at least one second joint portion in which the walls of said first tubular body and said second tubular body are in contact with each other in a cup-like surface configuration (Fig 1; Examiner considers the dent portion to form a cup-like surface).

the wall of said first tubular body including a forward surface located forward relative to the drawing direction, and the wall of said second tubular body including a rearward surface located rearward relative to the drawing direction (Fig 1),

a joint portion, the forward surface including a portion that is reduced diametrically relative to the drawing direction, the rearward surface including a portion that is reduced diametrically relative to the drawing direction, the diametrically reduced portion of the forward surface being in contact with the diametrically reduced portion of the rearward surface such that they are separable from each other in the drawing direction (Fig 1).

However, Tetsuo et al do not disclose an additional joint portion comprising a rivet that is laterally extruded into the wall of the second tubular body, wherein the forward surface including a concave portion that is enlarged diametrically relative to the drawing direction, the rearward surface including a convex portion that is enlarged diametrically relative to the drawing direction, the diametrically enlarged portion of the

forward surface being extruded into the diametrically enlarged portion of the rearward surface, thus ensuring high peeling resistance.

Stevenson et al teach an assembly (Fig 8) having a joint portion comprising a rivet (100) that is laterally extruded into the wall of the second tubular body, to prevent relative rotation of the two secured bodies joined together (Col 1, Lines 52-59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the joint portion of Stevenson et al to have an additional joint portion as taught by Downey et al to prevent relative rotation of the two secured bodies joined together.

Examiner again notes that it is the patentability of the product, and not recited process steps, that is to be determined in product-by-process claims irrespective of whether or not only process has been recited. Accordingly, it is of little consequence how the joint portions were formed when the joint portions are present. See MPEP § 2113. Examiner also notes that the specific method of forming is not germane to the issue of patentability of the device itself. Therefore, the limitations "extruded" and "formed by a rivet" has been given only limited patentable weight. See MPEP § 2113.

As to Claim 19. Tetsuo in view of Stevenson et al disclose the tube assembly significantly as claimed, but do not explicitly disclose at least two joint portions of the plurality of joint portions are located at diametrically opposite positions perpendicular to an axial direction of the tube assembly. Tetsuo does, however, disclose that "the grip part is fixed... at a plurality of points (P) on its outer surface at suitable intervals in the circumferential direction of the grip part" (Abstract), implying that at least two of the joint

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portions could be arranged such that they were located at diametrically opposite positions. It would have been obvious to a person of ordinary skill in the art to modify Tetsuo in view of Stevenson et al as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn, because the instant invention as claimed has the properties predicted by the prior art, it would have been obvious to have at least two of the joint portions could be arranged such that they were located at diametrically opposite positions order to gain the commonly understood benefits and applications of such an adaptation and/or modification, producing no new and unexpected results.

Response to Arguments

Applicants' arguments filed 8/13/2007 regarding claims 2, 4-6 and 15-18, have been fully considered but they are not persuasive.

Applicants argue:

"neither Tetsuo et al nor Schleicher teaches or suggests a combination of the two types of joints. The combination of the two types of joints results in requiring at least two types of punches and dies corresponding to the two types of joints, and thus production costs would be increased ... Rather than combining the two types of joints in a single assembly, one of ordinary skill in the art would have simply substituted the joints taught by Schleicher for the joints employed in Tetsuo. ... combining the teachings of the prior art based on the present disclosure is an impermissible use of hindsight" (Pages 9-10)

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Examiner respectfully disagrees. In response to Applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, "it should be too well settled now to require citation or discussion that the test for combining references is not what the individual references themselves suggest but rather what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. Any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper." In re McLaughlin, 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971). In this particular case, simply because a certain type of single joint is used to connect two members in one application does not preclude the use of that joint in combination with another joint. Adding the second joints of Schleicher adds a factor of safety and a more dynamic securement in the assembly and thus, creates a stronger connection without producing any new or unexpected results. The strongest rationale for combining references is a recognition, expressly or impliedly in the prior art or drawn from a convincing line of reasoning based on established scientific principles or legal precedent, that some advantage or expected beneficial result would have been produced by their combination. In re Sernaker, 702 F.2d 989, 994-95, 217 USPQ 1, 5-6 (Fed. Cir. 1983).

Applicant's further argue:

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"Schleicher discloses in Figs. 18 and 19 a single joint portion having two effects, namely shear strength and peeling resistance. However, since the two effects are applied to only a single joint portion, the joint portion can exert the shear strength in only one direction. For example, if the joint portion has shear strength in a direction parallel to the joint surfaces of the joint portion, it follows that the joint portion will not have shear strength in a direction perpendicular to the joint surfaces.

In view of the above, it is submitted that the Tetsuo and Schleicher references do not disclose or suggest a combination of two types of joints as claimed in claims 2 and 15 of the present invention" (Pages 10-11)

Examiner respectfully disagrees. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., Inc., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant's further argue:

"Further, Stevenson shows a single type of joint which employs a self-piercing rivet. Thus, the collective teachings of Tetsuo and Stevenson do not teach an assembly in which different types of joint portions are employed to provide both high peeling resistance and high shear strength. Therefore, the Tetsuo and Stevenson references would not result in Applicants' invention as defined in claims 2, 15, 19 and 20." (Pages 11-12)

Examiner respectfully disagrees. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., Inc., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA T. KENNEDY whose telephone number is (571)272-8297. The examiner can normally be reached on M-F: 7 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joshua T. Kennedy/
Examiner, Art Unit 3679
4/28/2008

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679